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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,166	03/05/2002	Yoshimasa Sakata	Q68207	5464
23373	7590	07/29/2004	EXAMINER	
SUGHRUE MION, PLLC			HON, SOW FUN	
2100 PENNSYLVANIA AVENUE, N.W.			ART UNIT	
SUITE 800			PAPER NUMBER	
WASHINGTON, DC 20037			1772	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/090,166

Applicant(s)

SAKATA ET AL.

Examiner

Sow-Fun Hon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 25 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19 and 25 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Withdrawn Objection

1. The objection to the abstract has been withdrawn due to Applicant's amendment dated 04/29/04.

Rejections Repeated

2. The 102(b) and 103(a) rejections are repeated for the same reasons previously of record in the Office action dated 01/29/04.

Response to Arguments

3. Applicant argues that in Tomohito, the constitution of the layers is: substrate/epoxy resin layer/mixed resin layer/reflective electrode, while the present claims contain a resin sheet layer comprising a hard coat layer and an epoxy resin layer, wherein the diffuser is localized in the epoxy layer.

Applicant is respectfully apprised that the features upon which applicant relies (i.e., the order of the layers with respect to each other and the other layers) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Tomohito has a resin sheet containing dispersed particles (particulate material) having an average particle diameter of between several 0.01 μ m (translated from several 10 nm) and several

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10 μ m (micrometers) (overlaps claimed range of 0.2 to 100 μ m), in an epoxy resin layer (transparent layer 4) which comprises the particulate diffuser having a refractive index (high refractive index) different from that of the epoxy resin (low refractive index) [section 0051].

Tomohito teaches that the other resin phase separates from the matrix resin and forms particles (other resin condensed in the shape of a ball) which float to the surface (came floating in resin) and form a rough surface (the shape of toothings) [section 0033]. This is the same mixed resin which comprises transparent resin layer 4 [section 0051]. Applicant teaches that the diffuser is allowed to float in the epoxy resin in order to form the concentration distribution (specification, page 16, 4th paragraph). Thus the diffuser of Tomohito localizes so as to have a concentration distribution in the direction of the thickness of the epoxy resin layer as defined by Applicant.

Tomohito teaches a hard coat layer (hardened overcoat) on the transparent mixing layer 4 [section 0052].

4. Applicant argues that claim 1 calls for a reflecting layer comprising a thin metal layer [not taught by Tomohito].

Applicant is respectfully apprised that Tomohito teaches that the mixed resin layer 4 is formed on a thin metal layer (metal thin film) present as a reflecting layer (light reflex film) [section 0045].

5. Applicant argues that independent claim 7 calls for an inorganic barrier layer [not taught by Tomohito].

Applicant is respectfully apprised that Tomohito teaches that the mixed resin layer 4 is formed on a thin metal layer (metal thin film) present as a reflecting layer (light reflex film)

[section 0045]. Aluminum is given as an example of a metal thin film with a thickness of 150 nm (1500 Angstrom) [section 0057]. Aluminum is inorganic, and also functions as a gas and moisture barrier layer (claim 7), with an oxygen permeability of $0.3 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less and moisture permeability of $10 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less, as evidenced by Nakamura et al.

Nakamura et al. teaches that aluminum film has oxygen permeability of $0.5 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (abstract) which encompasses the claimed range of $0.3 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (claim 5) and moisture permeability of $0.5 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less which is part of the claimed range of $10 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (claim 14).

6. Applicant argues that independent claim 16 recites the presence of a gas barrier layer and a color filter layer [not taught by Tomohito].

Applicant is respectfully apprised that Tomohito teaches that the mixed resin layer 4 is formed on a thin metal layer (metal thin film) present as a reflecting layer (light reflex film) [section 0045]. Aluminum is given as an example of a metal thin film with a thickness of 150 nm (1500 Angstrom) [section 0057]. Aluminum is inorganic, and also functions as a gas and moisture barrier layer (claim 16), with an oxygen permeability of $0.3 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less and moisture permeability of $10 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less, as evidenced by Nakamura et al.

Nakamura et al. teaches that aluminum film has oxygen permeability of $0.5 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (abstract) which encompasses the claimed range of $0.3 \text{ cc/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (claim 5) and moisture permeability of $0.5 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less which is part of the claimed range of $10 \text{ g/m}^2 \cdot 24\text{h} \cdot \text{atm}$ or less (claim 14).

Tomohito teaches that a color filter layer (claim 16) is positioned under the epoxy resin layer [section 0050].

7. Applicant argues that the present application provides unexpectedly thin and lightweight liquid crystal displays with improved visibility, reduced yellowish tint and reduced glittering, mechanical strength, as compared to Tomohito.

Applicant is respectfully apprised that these features (i.e thickness, weight, visibility in terms of contrast ratio and resolution, small yellowness index change, glittering in terms of scattering ratio, heat resistance in terms of distortion, mechanical strength in terms of the various moduli) are not recited in the present claims, and that comparative data have not been presented.

8. Applicant argues that the present application comprises a filter which does not include a step in which a multilayer structure comprising a hard coat layer, gas barrier layer, and epoxy resin layer, is peeled from the substrate before a color filter layer is superposed thereon, thus reducing position shifting in the patterning for color filter formation, resulting in higher accuracy of [positioning].

Applicant is respectfully requested to cite the section of Tomohito which teaches that the multilayer structure is peeled from the substrate before the color filter layer is superposed thereon. Furthermore, a demonstration of unexpected results is needed to show that there is a difference between the two methods, in terms of the product.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

Sow-Fun Hon

07/20/04


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

7/23/04